

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 06-177101

(43)Date of publication of application : 24.06.1994

(51)Int.Cl.

H01L 21/304  
C11D 7/60  
//(C11D 7/60  
C11D 7:04  
C11D 7:18 )

(21)Application number : 04-349975

(71)Applicant : MITSUBISHI MATERIALS CORP  
MITSUBISHI MATERIALS  
SHILICON CORP

(22)Date of filing : 03.12.1992

(72)Inventor : TAKAHASHI ISAO  
TATSUTA JIRO  
SHINGYOUCHI TAKAYUKI  
MORITA ETSURO

## (54) IMPROVED SILICON WAFER CLEANING LIQUID

### (57)Abstract:

PURPOSE: To prolong service life of an alkaline silicon wafer cleaning liquid by adding surfactant to a cleaning liquid and foaming it to form a bubble layer on the surface thereby preventing ammonia from scattering.

CONSTITUTION: Surfactant is added to an alkaline silicon wafer cleaning liquid composed of ammonia, hydrogen peroxide, and water to form bubbles on the surface of the liquid thus preventing ammonia from scattering. More specifically, a cleaning liquid containing 0.055% of ammonia, 0.05% of hydrogen peroxide, and 0.5% polyoxyethylene nonyl ether is held as it is at 80°C while containing 10ppb of Cu and Fe being mixed as contaminants at the time of cleaning. This cleaning liquid suppresses scattering of ammonia positively.

## LEGAL STATUS

[Date of request for examination] 19.01.1998

[Date of sending the examiner's decision of rejection] 25.01.2000

[Kind of final disposal of application other than